

## Cell Cycle Observations

### 1. Interphase Observations

---

---

- Onions have 16 molecules of DNA (chromosomes), 8 from one parent and 8 from the other parent. **After the 'S' Phase**, how many molecules of DNA are in the cell? \_\_\_\_\_

- During Interphase, what other things happen?

---

### 2. Prophase Observations

---

---

- What happens to the nucleus in Prophase? \_\_\_\_\_

- What structure forms during Prophase? \_\_\_\_\_

### 3. Metaphase Observations

---

---

- Where are the chromosomes during metaphase?

- What attaches to the chromosomes during metaphase?

---

### 4. Anaphase Observations

---

---

- What happens to the chromosomes during anaphase?

---

- What is moving the chromosomes? \_\_\_\_\_

---

## 5. Telophase Observations

---

---

- Where are the chromosomes during telophase?

---

- What is forming around the chromosomes? \_\_\_\_\_

- What happens to the cell? \_\_\_\_\_

## 6. Cytokinesis Observations

### a. Onion

---

---

### b. Fish

---

---

- What divides the cell of the fish? \_\_\_\_\_

- What divides the cell of the onion? \_\_\_\_\_

After the cell has divided, how many molecules of DNA will be in each new cell?

---

## Part 2: Independent Identification

Use the photos to complete this assignment.

1. Count the total cells in INTERPHASE and record into the data table.
2. Count the total cells in PROPHASE and record into the data table.
3. Count the total cells in METAPHASE and record into the data table.
4. Count the total cells in ANAPHASE and record into the data table.
5. Count the total cells in TELOPHASE/CYTOKINESIS and record into the data table.
6. Add all the cells you counted and record into the data table.

Phase	Number of Cells	# cells / total cells
Interphase		%
Prophase		%
Metaphase		%
Anaphase		%
Telophase/Cytokinesis		%
TOTAL		

7. Which phase do cells spend the **most** time in?
8. If the cell cycle takes 1440 minutes (24 hours), how much time will each cell spend in each phase?

Interphase \_\_\_\_\_  
Prophase \_\_\_\_\_  
Metaphase \_\_\_\_\_  
Anaphase \_\_\_\_\_  
Telophase \_\_\_\_\_

9. If a doctor observed that your cells were in Interphase 20%, Prophase 20%, Metaphase 20%, Anaphase 20%, and Telophase/Cytokinesis 20%, what would this mean?